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land use plan



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North Central Florida Regional Planning Council

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RESOLUTION

WHEREAS, the North Central Florida Regional Planning Council is preparing a Regional Comprehensive Plan, the basic goal of which is to "improve our quality of living;" and

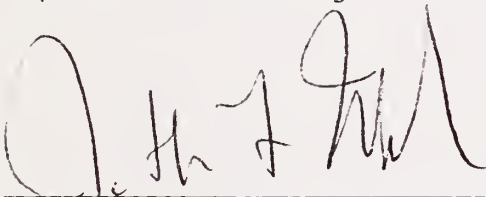
WHEREAS, achievement of this goal is dependent upon sound comprehensive planning addressing the problems and opportunities for future growth and prosperity of the region; and

WHEREAS, it is the goal of the Council to blend man's activities with the region's natural resources and processes; and

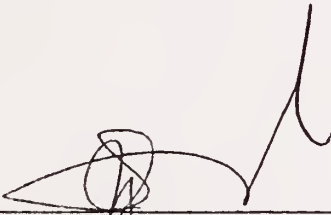
WHEREAS, it is an objective of the Council to encourage the orderly and harmonious development and redevelopment of existing communities and, further, to support the preservation of areas of historical and archeological significance; and

WHEREAS, the adoption of the Land Use Plan study will assist in the achievement of the goals, policies and objectives of the Council, as well as provide assistance and guidance to local governments in the preparation of local plans;

NOW, THEREFORE BE IT RESOLVED, the Council adopts the Land Use Plan to manage land development in an equitable manner based upon a plan and implemented according to consistent development standards.



Jonathan F. Wershow, Chairman
February 23, 1978



Jerry Scarborough, Secretary-Treasurer
February 23, 1978

LAND USE PLAN

The preparation of this report was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development.

July, 1977

North Central Florida Regional Planning Council
2002 Northwest 13th Street, Suite 202
Gainesville, Florida 32601
(904) 376-3344

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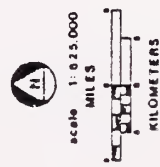
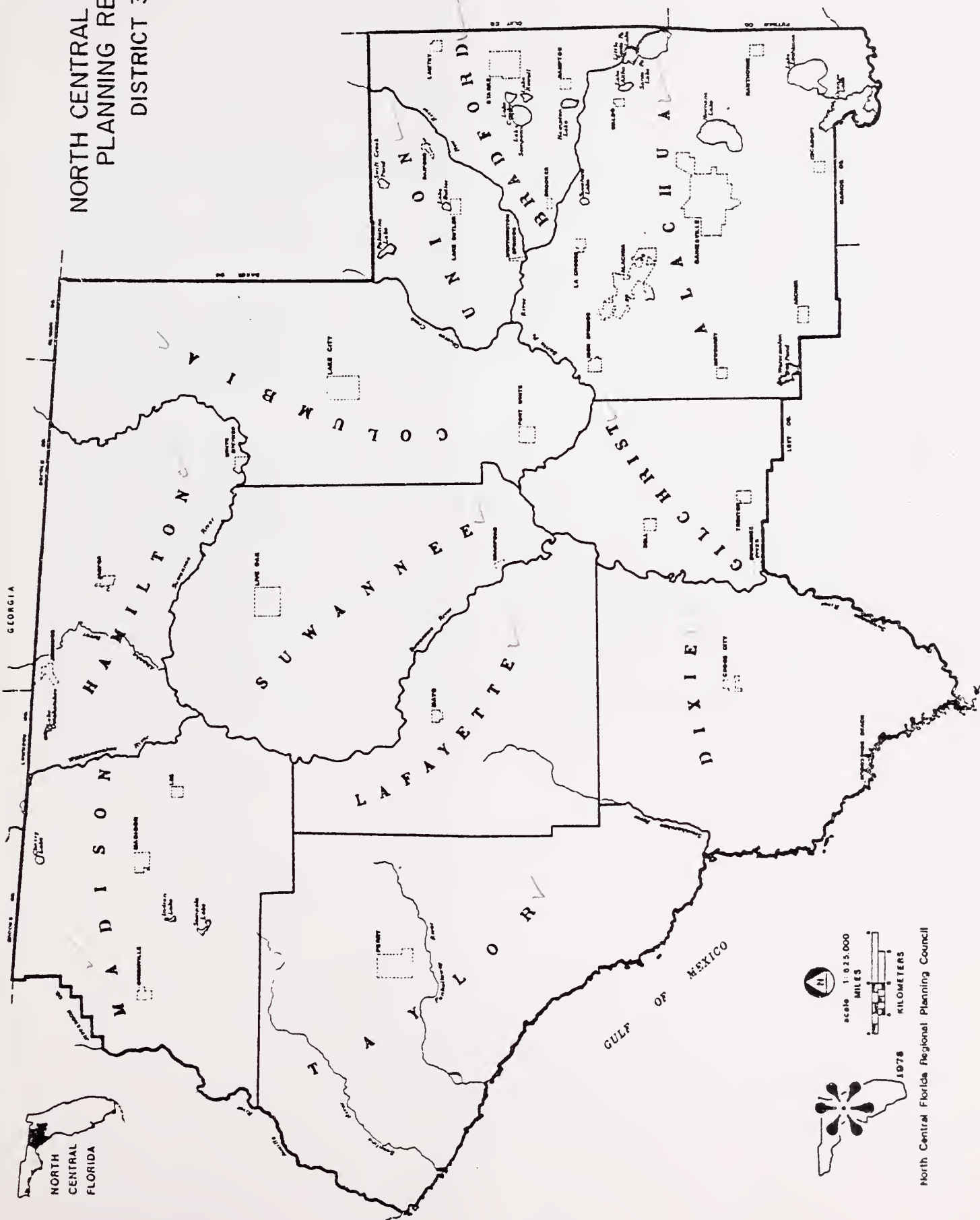
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NORTH CENTRAL FLORIDA PLANNING REGION DISTRICT 3



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INTRODUCTION

The objective of the Land Use Plan is to develop a mechanism to assist the decision-making process with regard to land use and land management within the Region. A continuing effort is being made to develop and refine a planning tool consisting of a series of map overlays depicting a variety of physical characteristics of land within the Region, ranging from existing urban areas to natural systems to future urban area needs. Utilizing some of the same data as the Natural Resources Study, these overlays will be used to construct a map showing land within the Region divided into three use categories: preservation, conservation, and development. Finally, a composite map will be developed showing these categories in relation to existing urban areas and transportation networks, as well as those areas expected to be converted to urban use.

The study addresses but does not resolve land use issues such as new communities, density of development, and water use, although it does offer recommendations in these areas and others, such as conflicting land uses. The reader should be cautioned that this plan is not intended as a panacea for local land use problems or conflicts. Indeed, regional planning is supplementary to local planning and not a substitute for it. The purpose of this study is therefore to provide a broad framework within which local governments can plan for their own growth and orderly expansion. The plan therefore serves to alert local governments to the natural systems and resources of their Region, to provide an indication of development trends and the consequences thereof, and to recommend a direction for policy activity.

Policy activity must strive to accommodate anticipated population growth while maintaining the integrity of natural systems. This study is so oriented.

SUMMARY AND CONCLUSIONS

The information presented in the study indicates the complexity of the land use issue, and illustrates the interrelationships between the environment and human activity. Much of the data are closely integrated with data presented in the accompanying Natural Resources Study. The two studies complement each other and should be considered together.

Following a description of lands within the Region in terms of physiographic characteristics, population projections from the 1976 Population and Economic Study are utilized to project urban area needs in terms of square miles of land consumed. The implicit assumption is that population and economic growth will concentrate in and around current urban areas, and that the physical expansion of these areas to accommodate the growth will occur in an orderly and well managed fashion. Finally, lands and waters within the Region are grouped into three land use categories: preservation, conservation and development. The Land Use Plan map shows these three land use categories in relation to each other, to the existing urban areas, to the existing transportation systems, and to the anticipated future urban area needs.

The study concludes that prime agricultural lands, rivers, wetlands and historic, archeological and natural areas should be preserved, and the values or functions associated with these areas should be protected. The study also shows that there exists within the Region sufficient land area to accommodate the projected population and economic growth without sacrificing prime agricultural lands, and urges local governments to discourage the development of new communities.

The study illustrates the dependency of human development upon natural resources, and attempts to present a method whereby decision-makers and citizens alike can rationally approach land use issues. Water supply is one such resource that influences human activity, and the study is careful to point out that while the Region sets upon a large portion of the Floridan Aquifer, the quantity of fresh water contained therein is as yet unknown, and it would be unwise to assume that the supply is unlimited. Freshwater supply problems in southern Florida serve as as examples to forewarn area residents against haphazard development.

The importance of considering natural resources and natural systems when deciding land use questions is stressed throughout the study. Indeed, much of the data and techniques of analysis and presentation are shared with the Natural Resources Study. The study is oriented toward designing land use

policies at the local level which are cognizant of the importance of maintaining the integrity of natural systems. The goals, objectives and policies presented in this study represent broad policy statements at the regional level, within which local policies may be designed to meet specific needs.

GOALS, OBJECTIVES, AND POLICIES

GOAL: To manage growth and guide development within the Region utilizing land management techniques to maximize efficiency in (land) use while minimizing current and potential long-term detrimental impacts to the land, natural resources or the quality of life.

OBJECTIVE: To encourage the orderly and harmonious development and redevelopment of existing communities.

POLICIES: To maintain and enhance the quality of the environment by the proper use and development of land, within the tolerances of natural systems.

To utilize energy and natural resources prudently and efficiently in the use and development of land.

To employ land use guidelines to preserve land and natural resources for use by future generations.

To assess a wide variety of alternatives to lateral expansion of communities to accommodate the growth of human settlements.

To encourage the revitalization and redevelopment of existing communities, recycling natural resources where possible, as opposed to initiating new communities.

OBJECTIVE: To protect and promote the health, safety, social and economic well-being of residents within the Region by properly managing land development.

POLICIES: To support the preservation of areas of historical and archaeological significance.

To encourage the preservation of areas of unique agricultural significance.

To encourage the judicious use of those lands which are suitable for both agriculture and development by providing local governments with the most up-to-date information available for use in the decision-making process.

OBJECTIVE: To protect and maintain the desirable social and economic characteristics and functions of urban areas in a manner consistent with the capabilities of the natural and man-made systems of the area.

POLICIES: To encourage the provision of adequate community services and facilities.

To assist local governments in the development and implementation of comprehensive plans.

OBJECTIVE: To manage land development in an equitable manner based upon a plan implemented according to consistent development standards.

POLICIES: To distribute growth and development within the Region in a manner consistent with support capabilities of available resources.

To assist local governments in the development and implementation of comprehensive plans, including but not limited to land use guidelines, zoning and subdivision regulations.

EXISTING LAND USE

The following pages present land use profiles for each of the eleven counties in the Region, as well as a regional summary. The profiles are limited to five specific land use categories--urban and built up, agriculture, forested, water, and wetlands--plus a general category to include uses which do not fall within the previous five descriptive categories. In each situation that the general category is used the specific land use is identified. Each profile also provides a county summary, subdividing the total county area into total land and total water areas. A similar summary is provided for the Region as a whole.

Data for the construction of these tables came from a variety of sources, as noted at the bottom of each table. County and/or city comprehensive plans were utilized where they existed, as were several river basin plans, coastal zone documents, and census documents. In a few cases some interpolation of data was necessary. As a check to this methodology, and as a safeguard against unsound interpolation results, the figures for total area were compared with the latest edition of the Florida Statistical Abstract. The variance, if any, and the direction of variance was noted at the foot of each table. The variance experienced after summing data from the eleven counties totaled 67 square miles, or 42,865.75 acres, representing less than one percent of the estimate in the aforementioned abstract.

The nature of the tables is such that no accompanying narrative is necessary, although one is provided for the regional summary.

The predominant land use in the Region is forest production, accounting for nearly 60 percent of all land within the area. This percentage is even greater if the area of the Osceola National Forest is included, and greater still if forested wetlands are added.

Second in rank of land area consumed is agriculture, signifying primarily crop lands and pasture land. A distant third is wetlands, including coastal marshes, followed by urban areas. Although urban areas cover 250 square miles of land, those areas represent less than four percent of the total land area within the Region. This is a striking contrast to the heavily urbanized areas in southern Florida, and indicates that there is sufficient room to accommodate the anticipated population growth within the parameters of manageable expansion identified later in this study.

DEFINITIONS

Urban and Built-up - Cities and metropolitan areas, not limited to the confines of city limits, but including urbanized areas contiguous to cities, to the extent identifiable; includes correctional institutions such as Raiford. Also included are residential areas, schools, service facilities such as water, sewer, solid waste disposal, and utilities, as well as transportation networks, shopping and governmental buildings. This constitutes the most intense use of land, and it is assumed that such use precludes the return of the land to its natural state.

Mining - An industrial use of the land distinct from urban and built-up areas. Shown separately as a means of identifying mining activities within the Region, and to give some indication of the scale of these operations; intense use of land, although the land can theoretically be returned to its natural, pre-mining state. In the land use profiles mining falls into the 'Other' category, since it is not indigenous to all 11 counties.

Agriculture - Specifically, crop lands and pasture lands; temporarily alters the landscape and is not considered as intense a land use as mining or urban activity.

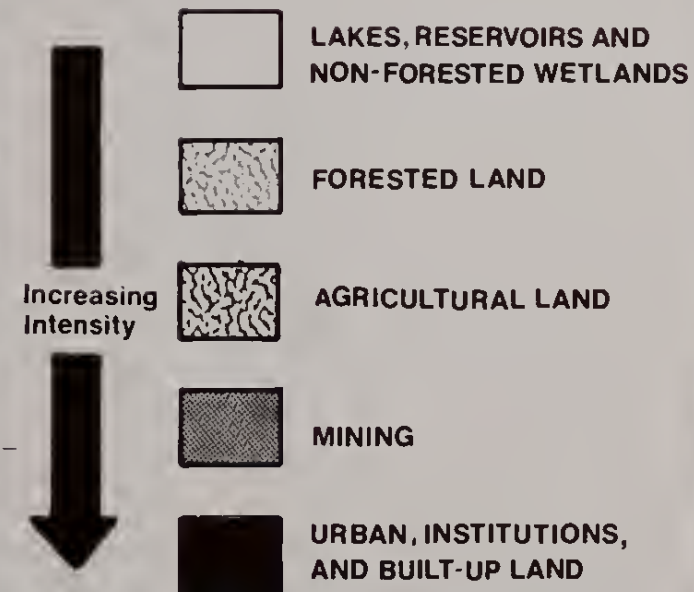
Forests - Refers in this instance to commercial forests, since the smaller, individually owned tracts of land which have trees on them are not considered a major factor in determining land uses in the Region. Clear cutting is acknowledged as being the most common forest management practice, although not all clear cutting is for that purpose. Forest development and management is considered a less intense use of land than agriculture.

Water - Primarily lakes.

Wetlands - In the land use profiles, this category signifies forested and non-forested wetlands, those areas where the water table is at, near or above land surface for most of the year. Signified by swamps, and fresh and salt water marshes, wetlands serve as habitats for specific types of vegetation and wildlife, and serve other important natural functions such as aquifer recharge areas. Due to the scale of the reproduction, wetlands are not shown on the Existing Land Use Map. However, these areas are described in much detail in the accompanying Natural Resources Study.

NORTH
CENTRAL
FLORIDA

EXISTING LAND USE



1976



MILES



North Central Florida Regional Planning Council

TABLE 1-A
LAND USE PROFILE
REGION III SUMMARY

CATEGORY	ACRES*	('76 F.S.A.) SQUARE MILES*	%
Urban & Built Up	160,167	250.0	3.7
Agriculture	1,142,298	1,785.4	26.2
Forested	2,533,556	3,960.0	58.2
Water	62,409	97.6	1.4
Wetlands	404,814 ^a	632.5 ^a	9.3 ^a
Other:			
Extractive	10,657	16.7	.2
Osceola Forest	77,802	121.6	1.8
Rangeland	16,796	26.3	.4
Total Land Area	4,290,090	6,705.1 (6,775.4)	98.6
Total Water Area	62,409	97.6 (94.6)	1.4
Total Area	4,352,499	6,802.7 (6,870.0) ^b	100.0

^aSee Footnote No. 3, Alachua County Land Use Profile, p. 12

^bThe total area estimate differs from the 1976 Florida Statistical Abstract estimate by 67 square miles, representing 0.97 percent of Florida Statistical Abstract figure; 67 square miles represents 42,865.75 acres.

*See Appendix A.

**Columns may not appear to add correctly due to rounding of figures.

TABLE 1-B
LAND USE PROFILE
ALACHUA COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	55,245 ^a	86.3
Agriculture	272,609 ^b	421.9
Forested	258,000	403.3
Water	31,600	49.4
Wetlands	(56,000) ^c	
Total Land Area	585,854	915.5
Total Water Area	31,600	49.4
Total Area	617,454	964.9

^aThis figure was derived from Table 9, page 24, "Land Use Profile Unincorporated (Gainesville Urban Area) 1963 and 1971"; Table 10, page 32, "1971 Land Use Profile, Non-Urban Area and Small Municipalities", Alachua County Comprehensive Plan, 1975-1995, Volume II, 1975; Table 3, page 13, Census of Local Governments, Florida Department of Community Affairs, 1977.

^bTable 9, page 24, Table 10, page 32, Alachua County Comprehensive Plan, 1975-1995, Volume II; Includes area identified as Agriculture, as well as Vacant and Undeveloped Lands.

^cTable III-9, Page 3-34, "Florida Wetlands of the Northeast Gulf River Basins by Counties", Northeast Gulf River Basins, Florida, Alabama, Georgia, Cooperative Study, United States Department of Agriculture, et al, 1977; Staff estimate of approximate acreage of total wetlands in Alachua County. The reader is cautioned that this figure includes acreage also identified as either Agriculture or Forested, and is therefore expressed parenthetically.

Total area figures coincide with data from the 1976 Florida Statistical Abstract.

*See Appendix A.

TABLE 1-C
LAND USE PROFILE
BRADFORD COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up ^a	21,795	34.1
Agriculture	57,416	89.7
Forested	91,897	143.6
Water	4,672	7.3
Wetlands	---	---
Other (Rangeland)	16,796	26.3
Total Land Area	187,904	293.7
Total Water Area	4,672	7.3
Total Area	192,576	301.0

^a Includes Recreation & Open Space - 93 Acres/.15 Square Miles.

Source: Table 1, pg. 180, "Existing Land Use for Bradford County, Florida", Technical Assistance to Bradford County in Developing a Land Use Plan: A Basic Research Document, 1974.

Figures for Total Area coincide with figures in 1976 Florida Statistical Abstract, Table 8.02, pg. 217.

*See Appendix A.

TABLE 1-D
LAND USE PROFILE
COLUMBIA COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	20,124	31.5
Agriculture	131,611	205.7
Forested	227,504	355.5
Water	1,751	2.7
Wetland	45,602	71.3
Other (Extractive- Oseceola National Forest)	450 77,802	.7 121.6
Total Land Area	503,093	786.2
Total Water Area	1,751	2.7
Total Area	504,844	788.9

Source: Table 3-1, pp. 64-66, "Existing Land Use for Columbia County Unincorporated Area", Comprehensive Planning Program, Columbia County, Florida, 1976.

Total Area figure coincides with 1976 Florida Statistical Abstract estimate table 8.02, pg. 217.

*See Appendix A.

TABLE 1-E
LAND USE PROFILE
DIXIE COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	7,560	11.8
Agriculture	13,230	20.7
Forested	393,600	615.2
Water	10,620	16.6
Wetland	28,740	44.9
Total Land Area	443,130	692.8
Total Water Area	10,620	16.6
Total Area	453,750	709.4

Source: Unpublished data furnished by Barr, Dunlop & Associates, Inc.

Total area coincides with 1976 Florida Statistical Abstract data, Table 8.02, pg. 217.

*See Appendix A.

TABLE 1-F
LAND USE PROFILE
GILCHRIST COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	7,855	12.3
Agriculture	78,243	122.3
Forested	69,845	109.2
Water	1,910	3.0
Wetland	64,780	101.3
Other (extractive)	80	.1
Total Land Area	220,810	345.2
Total Water Area	1,910	3.0
Total Area	222,713	348.2

Source: Table 4-1, pg. 72-73, "Existing Land Use for Gilchrist County Unincorporated Area", Gilchrist County Comprehensive Planning Program, 1976.

Total area figure coincides with 1976 Florida Statistical Abstract data, table 8.02, pg. 217.

*See Appendix A.

TABLE 1-G
LAND USE PROFILE
HAMILTON COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	10,859	17.0
Agriculture	69,583	108.8
Forested	224,629	351.1
Water	820	1.3
Wetland	11,560	18.1
Other (extractive)	10,127	15.8
Total Land Area	326,758	510.6
Total Water Area	820	1.3
Total Area	327,578	511.9

Source: Table 3-1, pp. 60-61, "Existing Land Use for Hamilton County, Unincorporated Area". Hamilton County Comprehensive Planning Program, Volume 1, 1976.

The total area estimate provided in Table 8.02, pg. 217, 1976 Florida Statistical Abstract is 515 square miles.

*See Appendix A.

TABLE 1-H
LAND USE PROFILE
LAFAYETTE COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	2,239	3.5
Agriculture	63,979	100.0
Forested	252,077	374.0 ^a
Water	1,919	3.0
Wetlands	20,473	32.0
Other	--	--
Total Land Area	338,768	529.5
Total Water Area	1,919	3.0
Total Area	340,687	532.5 ^b

^aIncludes 171 square miles of recreational area.

Source: Table 22.5 AA-3, pg. 111-142, & Table 22.5 BA-3, pg. 111-165, Aucilla - Ochlockonee - St. Marks Basin Water Quality Management Plan; Table 21.26 A-3, pg. 111-59 & Table 21.2 AA, pg. 111-42, Suwannee River Basin Water Quality Management Plan; Florida Department of Environmental Regulation, Aug. 1975.

^bTotal area figure of 532.5 square miles does not coincide with 1976 Florida Statistical Abstract figure of 551 square miles as provided in Table 8.02, pg. 217.

*See Appendix A.

TABLE 1-1
LAND USE PROFILE
MADISON COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	4,158.62	6.5
Agriculture	179,460.35	280.5
Forested	97,567.57	152.5
Water	3,838.72	6.0
Wetlands	152,909.10	239.0
Other	--	--
Total Land Area	434,095.64	678.5
Total Water Area	3,838.72	6.0
Total Area	437,934.36	684.5 ^a

^aTotal area figure of 684.5 square miles does not coincide with 1976 Florida Statistical Abstract figure of 708 square miles, Table 8.02, pg. 217.

Source Table 22.4 AA-3, pg. 111-123, & Table 22.5 AA-3, pg. 111-142, Aucilla - Ochlockonee - St. Marks River Basin Water Quality Management Plan; Florida Department of Environmental Regulation; Table 21.1 AA-3, pg. 111-4, & Table 21.2 BA-3, pg. 111-59, Suwannee River Basin Water Quality Management Plan, Florida Department of Environmental Regulation, August, 1975.

*See Appendix A.

TABLE 1-J
LAND USE PROFILE
SUWANNEE COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Build Up	16,455 ^a	25.7
Agriculture	224,302	350.6
Forested	197,211 ^b	308.2
Water	1,599	2.5
Wetland		
Total Land Area	437,968	684.6
Total Water Area	1,599	2.5
Total Area	439,567	687.1

^aLive Oak acreage interpolated from population density data provided by Table 3, pg. 17, "Population, population change, area density by county & municipality 1975", Census of Local Governments, Florida Department of Community Affairs.

^bTable 23 (see "Source" below) shows 198,810 acres of "Forests and Natural Areas"; yet no water area at all. The Suwannee River Basin Water Quality Management Plan, shows 2.5 square miles of water within the county. This area was subtracted from the "Forest & Natural Area" category as a "Natural Area".

Source: Table 23, pg. 79, "Existing Land Use, Suwannee County, Florida" (excluding area within Live Oak City Limits), Suwannee County Comprehensive Development Plan, 1974.

*See Appendix A.

TABLE 1-K
LAND USE PROFILE
TAYLOR COUNTY

CATEGORY	ACRES*	SQUARE MILES*
Urban & Built Up	9,636 ^a	15.1
Agriculture	25,665 ^a	40.1
Forested	621,696 ^a	971.7
Water	1,599 ^b	2.5
Wetland		
Total Land Area	656,997	1,026.9
Total Water Area	1,599	2.5
Total Area	658,576	1,029.4 ^c

^aTable 1, pg. 6, "Land Use Inventory, Taylor County", Florida Regional Coastal Zone Land Use Analysis, Region 3, North Central Florida, June 1976.

^bAucilla - Ochlockonee - St. Marks River Basin Water Quality Management Plan, Table 22-4 AA-3, pg. 111-123; Table 22-5 AA-3, pg. 111-142; Table 22.5 BA-3, pg. 111-165, Florida Department of Environmental Regulation.

^cThis figure is lower than the figure provided in the 1976 Florida Statistical Abstract, Table 8.02, pg. 217. That figure is 1,052 square miles, as opposed to the above figure of 1,029 square miles.

*See Appendix A.

TABLE 1-L
LAND USE PROFILE
UNION COUNTY

CATEGORY	ACRES*	SQUARE MILES
Urban & Built Up	4,240 ^a	6.3
Agriculture	26,200	41.0
Forested	99,530 ^a	155.4
Water	2,080	3.3
Wetland	24,750	38.7
Total Land Area	154,720	241.4
Total Water Area	2,080	3.3
Total Area	156,800	244.7

^aOnly 800 acres of institutional lands are considered developed with the remainder (7,300 acres) being state owned lands used for agricultural and forestry within the correctional facilities grounds.

Source: Table 1, pg. 21, "Existing Land Use, Unincorporated Union County", Union County Comprehensive Plan, 1976-2000 Part 1.

Total area figure coincides with figure provided in 1976 Florida Statistical Abstract.

*See Appendix A.

PHYSIOGRAPHIC CHARACTERISTICS

The following series of maps portray a variety of physical characteristics of the Region, as well as existing land uses, considered important to discussions of future land use alternatives. A number of other characteristics are identified in an accompanying volume, the Natural Resources Study, which explores the physical characteristics from a somewhat different perspective. The reader may wish to consult that volume for additional information, although the maps presented here are considered important to the development of the regional land use plan.

The information presented on these maps is essential to the construction of the land use categories and composite maps addressed later in this study.

EXISTING URBAN AREAS

The map on the following page shows the existing urban areas within the Region, as well as the major institutions, such as Raiford, the Lake Butler Reception and Medical Center, and correctional institutions in Trenton and Cross City. Urban areas are not confined to the corporate limits of the city, as evidenced by the large areas shaded representing the urbanized area in and around Gainesville. Similarly, the shaded areas represent urbanized areas as now identified, as opposed to city limits which are outlined with dashed lines. In most cases, a city's corporate limits extend beyond the areas that are actually built up. A striking example of this is the City of Alachua.

COMMERCIAL FORESTS

The shaded areas of page 27 represent land owned by commercial timber companies and used for the development of forest and forest products. The map is limited solely to commercial forests and does not include individual or public ownership of forested land, as evidenced by the absence of shading in the area of the Osceola National Forest. The map illustrates that significant portions of Bradford, Dixie, Lafayette, Taylor and Union Counties are used for forest production. A complete listing of ownership is not provided here, but is available at the Council Offices.

This map is not intended to represent total forest area in the Region, since it is felt that commercial ownership of forests may have a more significant impact upon land uses than individual ownership. A specific

vegetation map, without reference to ownership, is provided in the accompanying Natural Resources Study, identifying all lands within the Region which are covered by forests.

SOILS

Soils are one of our most valuable resources, and their functions are basic to many life processes. Every activity of man is affected by soils as a natural starting point, as soils provide the medium for growing food and fiber, as well as provide the foundation for homes, stores, factories, schools, airports, roads, playgrounds, and other human activities.

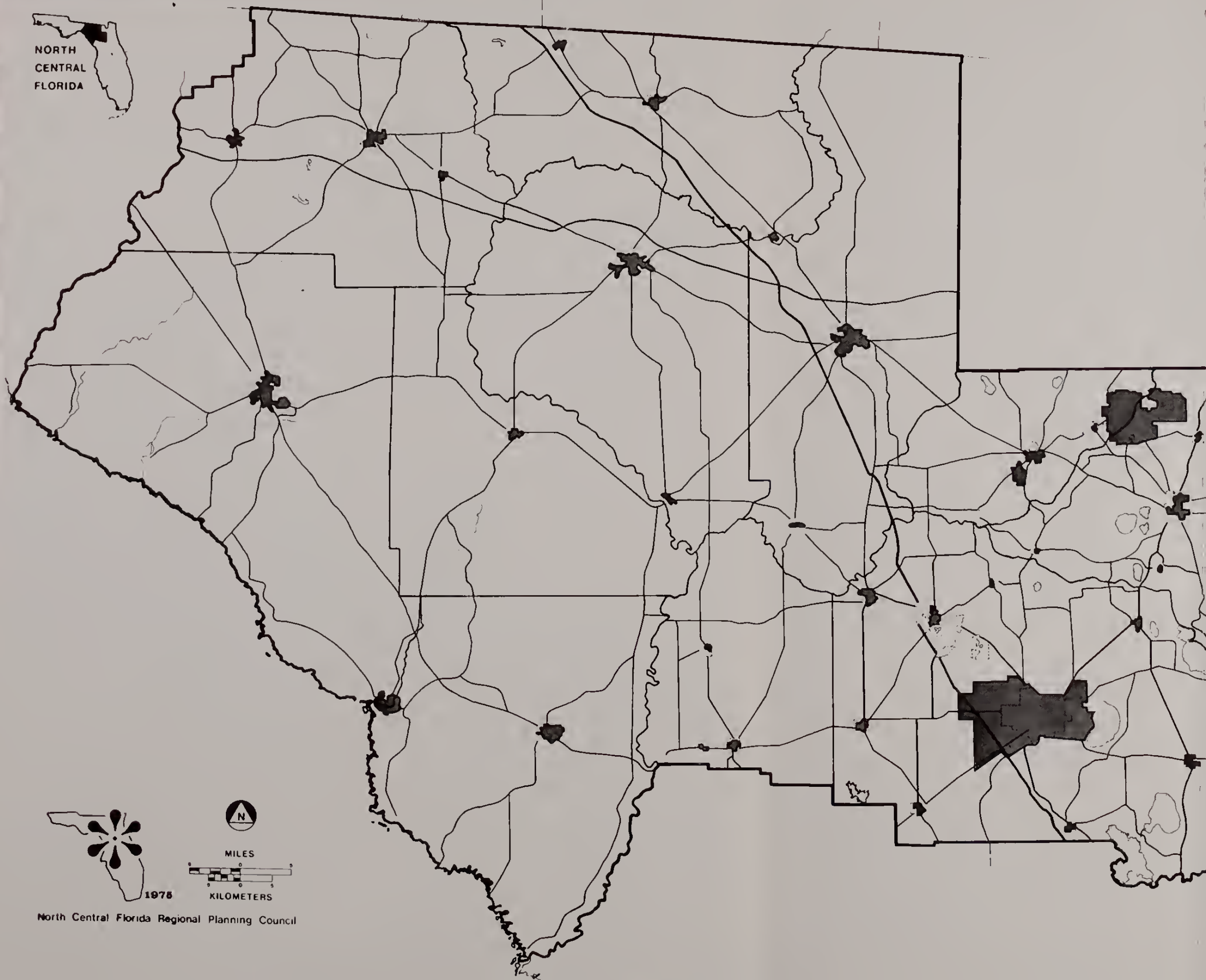
Soils possess many characteristics and/or properties which directly influence the types and feasibility of urban development. These characteristics include but are not limited to permeability, infiltration, wetness, depth to water table, depth to bedrock, texture and slope. Detailed descriptions including physical and chemical properties as well as limitations and capabilities are developed and reported for each kind of soil delineated on soil maps. Such maps provide a strong basis for developing land use alternatives by local governments and private developers. Adequate soil information greatly assists in developing and understanding the capabilities and limitations of sites for a variety of land use activities. Experience gained from selecting soils for farming, ranching and forestry may be applied equally well to selecting and evaluating sites for housing, highways, and a variety of other uses.

Soils maps at various scales and degrees of generalization may be developed and utilized along with interpretations to provide basic planning data for rural as well as urbanized areas. The scale and detail of soil maps and the level of generalization of soil data required are determined by the type of planning desired. Detailed soil maps are designed to meet the needs of operational planning, and consequently offer the highest degree of precision and predictability. By comparison, general soils maps are designed for broad planning purposes. Both general and detailed soil maps may be interpreted or explained by using tables, narratives and maps to illustrate ratings regarding soil suitabilities, limitations or potential for various uses.

For each soil association defined in the soils atlas an evaluation is provided which defines the association's relative degree of limitation based upon certain defined uses. Applying only to soils in their natural state, the degree and kind of limitation is defined for sanitary facilities, community development and water management among other potential uses. Soil limitations are indicated by the ratings; slight, moderate, and severe. These are not suitability ratings but more precisely, are measures of degree or intensity of soil limitations or hazards. As such they do not represent strict restrictions on soil use as most soils are suitable for all uses if provisions can be made to overcome problems presented. Provided adequate funding is available

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EXISTING URBAN AREAS AND INSTITUTIONS

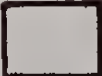


1975

North Central Florida Regional Planning Council

NORTH
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FLORIDA

COMMERCIAL FOREST AREAS

 FORESTED AREA



1978



MILES



KILOMETERS

North Central Florida Regional Planning Council

modern engineering techniques may be utilized to overcome almost any soil limitation.

Two soils maps are presented in this study, each map isolating a specific soils association to illustrate potential for certain defined uses. Soils maps showing all soils associations for the entire Region are provided, with explanation, in the Natural Resources Study published by this agency. The map on page 31 isolates the soil associations most suitable for general agricultural uses. Of the total of six soil groupings identified for agricultural suitability, the two shown here represent the best potential for agriculture relative to all the soils groupings identified. It is important to note that these ratings do not represent absolute evaluations of soil suitabilities for agricultural purposes. Rather, the soil associations identified in the general soils atlas was grouped into six broad categories according to relative suitabilities for agriculture, ranging from best suited to least suited. To obtain specific data regarding the agricultural use - crops, pine forest, pasture, etc. - best suited for a given soil group, a detailed soils atlas should be consulted.

The map on page 33 isolates the soils association with the least potential for community development. This should not be construed to indicate that development is wholly precluded in these areas. However, soil properties in these areas may have limitations to community development such that overcoming them may prove difficult, costly, and otherwise impractical.

FLOOD HAZARD AREAS

River Flood Plains

These are lands lying along drainage corridors (rivers and streams) that are subject to flooding on a regular basis. These areas usually contain mixed alluvial, poorly drained soils and natural vegetation that is adapted to fluctuating water levels. The vegetation is especially important in that it provides diversity to landscape, serves as vital habitat for numerous species of birds and animals and performs very significant ecological functions for the waters that flow through the drainage corridors.

Development in flood plains is usually very expensive, both initially and in terms of continuing maintenance costs. In spite of steadily increased expenditures for flood control structures, national losses due to floods continue to rise at an alarming rate. It is ironic that the most important factor contributing to this situation is persistent invasion of the flood plains by those land users most likely to suffer large financial losses from floods. While other uses such as forestry, recreation, open space, and agriculture may be acceptable in these areas, most development in flood plains that does not actually require access to waterfront is likely to become an unnecessary financial burden to local, state and/or federal governments and should be subject to strict regulations. River flood plains are subject to provisions of the federal flood insurance program, with special development controls being required for participation in the program.

Wetlands

Wetlands or depression flooding is also extensive in the Region, as the map illustrates. The discussion provided for river flood plains is also pertinent to wetlands, and will not be repeated. A detailed discussion of wetlands is offered in the next section of this study.

Hurricane Flood Zones

This category encompasses land between the shore line and the 100-year flood line; that is, the areas subject to flooding by hurricane driven tides that would occur with a statistical probability of at least once every 100 years. It should be kept in mind that this frequency prediction represents an average that may occur several times within a short time span or may be delayed for a considerable period. Most of the heavily populated and rapidly growing cities of south Florida have been very fortunate within the last three decades and have not been subjected to devastating hurricanes. Unfortunately, this has caused a false sense of security in many areas, thus setting the stage for natural disasters.

It should be recognized that hurricane driven tides are accompanied by severe wave action and are potentially far more destructive than the rising water associated with poor drainage. Future storm losses can be minimized, but only if they are anticipated and planned for. This, of necessity, will involve education of the general public through emergency preparedness programs and imposition of stringent building standards in areas subject to hurricanes and flooding.

It should also be recognized that the Federal Flood Insurance Program utilizes the 100-year flood line as a basis for granting flood insurance. To qualify for insurance under this program, all new residential construction must have ground floor elevations above the 100-year flood stage. Other uses have the option of either making ground floor elevation above this level or flood proofing buildings to that height. Participation in the program is mandatory in order to receive federal financial assistance for projects in flood prone areas. In addition, mortgage financing through any federally insured financial institution will be withheld from projects within identified flood prone areas under the jurisdiction of non-participating local governments.

WETLANDS

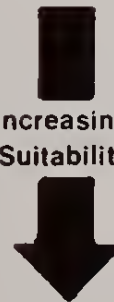
Selected Coastal Marshes

These are tidal marsh systems having major significance. Such areas are valuable habitat for numerous species of birds and terrestrial animals. Marsh systems contribute necessary nutrients to adjacent waters, and through filtering action help maintain good water quality. Many important marine species are dependent upon marsh systems for survival, and

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SOIL SUITABILITY FOR AGRICULTURE

Increasing
Suitability



1976



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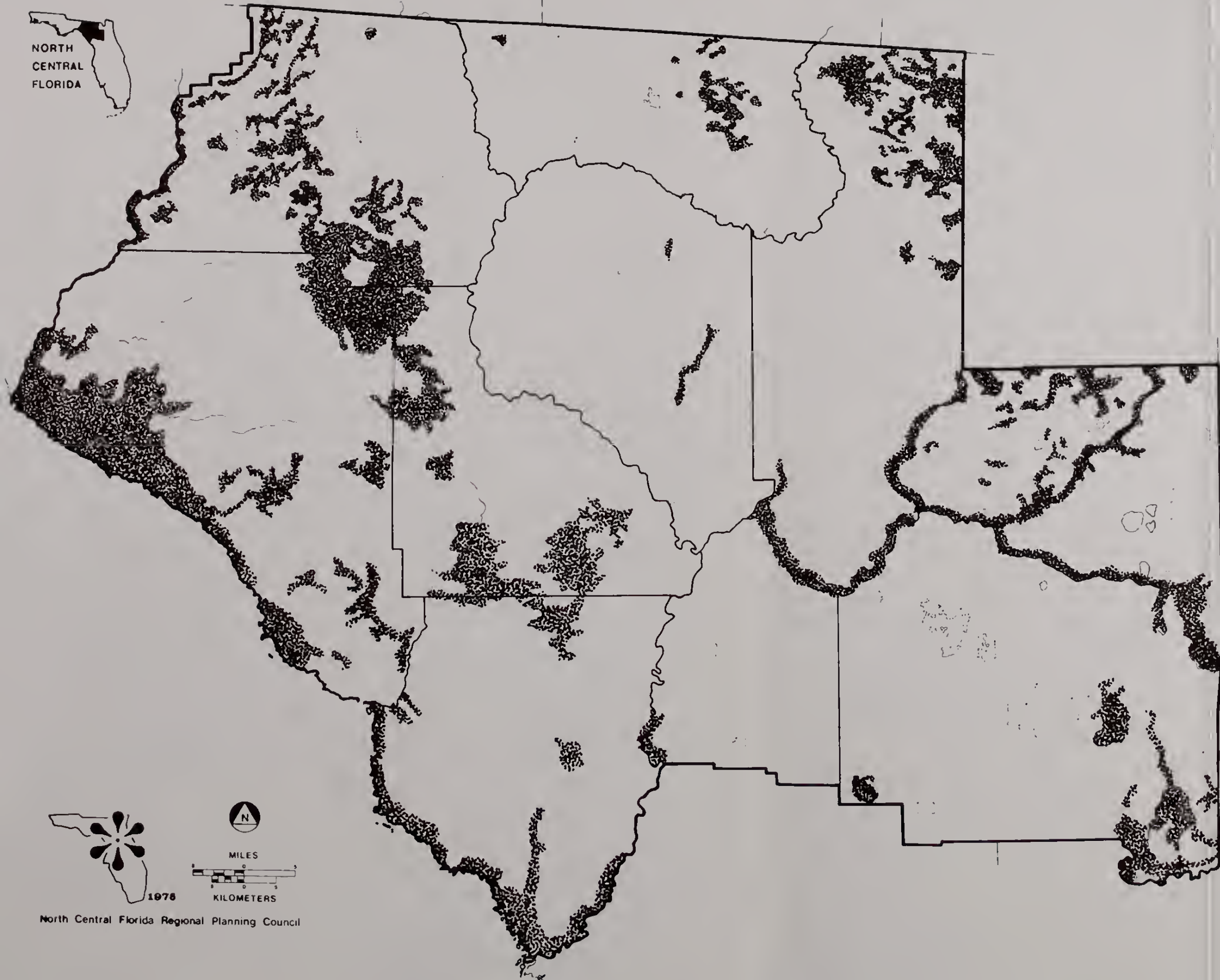


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FLORIDA

SOILS LEAST SUITABLE
FOR
COMMUNITY DEVELOPMENT



1978

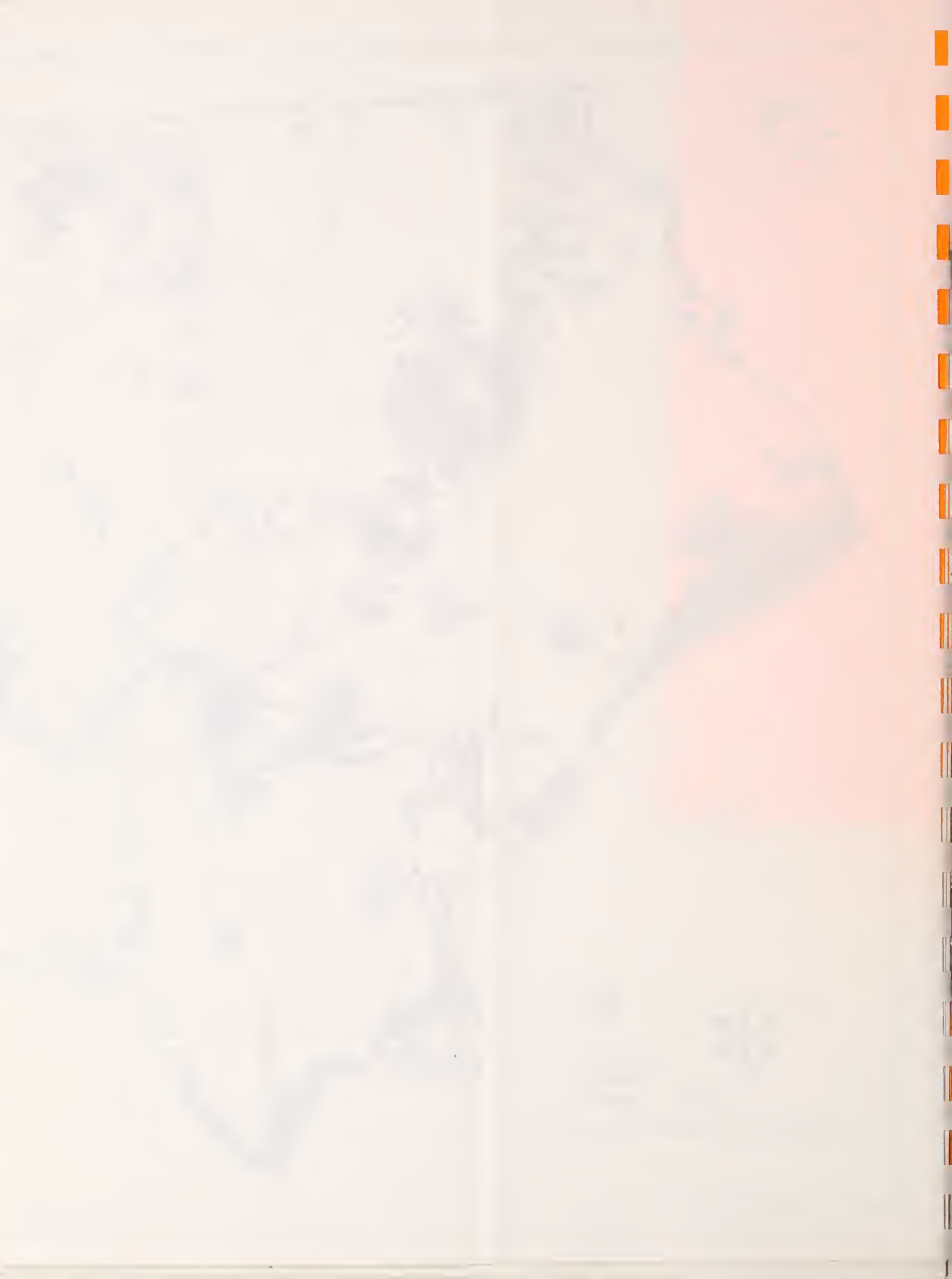


MILES



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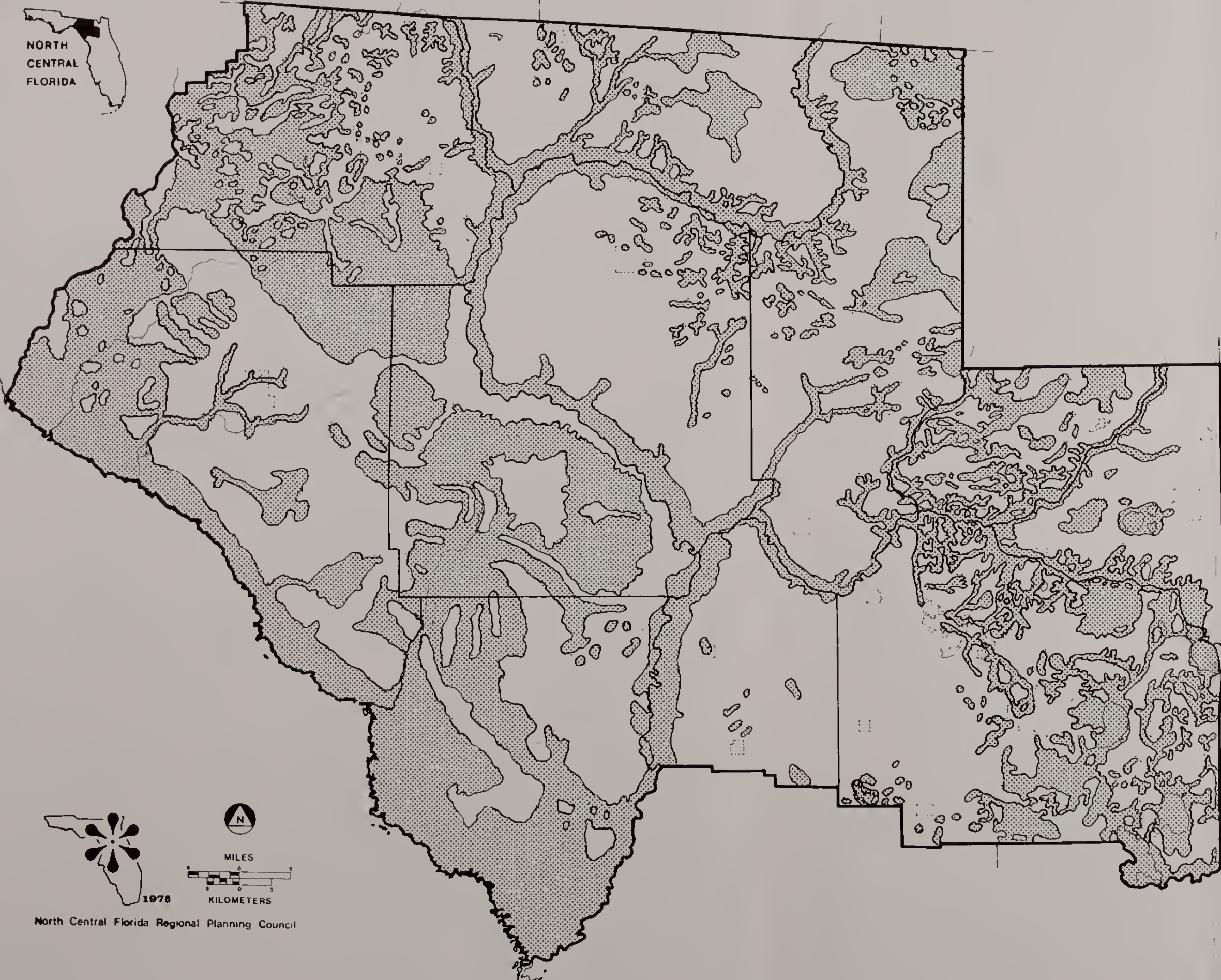
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AREAS SUBJECT TO 100 YEAR FLOOD



 FLOOD HAZARD AREAS



1978



MILES



KILOMETERS

NORTH
CENTRAL
FLORIDA

WETLANDS



WETLANDS



1978



MILES



KILOMETERS

North Central Florida Regional Planning Council

preservation of these areas is considered crucial to the maintenance of marine fisheries. Marsh systems also provide a storm-buffering function which helps to reduce damages to coastal development. Included in this category are high marsh areas generally considered as being above the mean high water line. Under Chapters 253 and/or 403, Florida Statutes, dredging and/or filling in portions of coastal marshes is regulated by the Department of Environmental Regulation. These areas are also subject to regulation by the U.S. Army Corps of Engineers.

Selected Freshwater Swamps and Marshes

As identified in the Florida Regional Coastal Zone Management Atlas, these are areas having a high water table and supporting extensive stands of water-tolerant vegetation. Such areas are unsuitable for intensive land uses without major alteration. They are usually of substantial ecological importance and serve as natural retention mechanisms for surface water. Some swamps and marshes may also function as aquifer recharge areas. Development in swamp and marsh areas typically involves a high initial cost and a high continuing cost that is often borne by government. Such problems as periodic flooding, poor stability of roads and streets, creation of health hazards, and subsequent expenditures of tax money for corrective measures are often encountered in such areas. Development in freshwater swamps and marshes, therefore, is likely to become an unnecessary tax burden.

Because of the ecological significance of these areas, their value for water retention purposes and their intrinsic unsuitability for intensive development, they should be managed to ensure against modifications that will significantly impair their identified functions or values. The state and federal governments presently exercise only limited authority over these areas, except in areas contiguous to "waters of the state" and in areas of public ownership such as wildlife refuges, state and national parks, state wilderness areas, and areas subject to flowage easements. Many freshwater swamps and marshes are in private ownership with very few effective controls on their use.

Due to scale limitations, some acreage mapped as wetlands includes low flatwoods pine lands which are intermingled with cypress ponds, strands, ti-ti drains and hardwood swamps.

HISTORICAL, ARCHEOLOGICAL, AND NATURAL AREAS

These are areas of outstanding historical and archeological significance which reflect Florida's rich and colorful history. These sites provide the informational base upon which our cultural heritage is built and reflect our ethnic origins.

Archeological and historical sites can be divided into three functional categories: informational, aesthetic, and commemorative. Informational sites are those sites whose primary significance is derived from the data

they have provided, or are likely to provide, to archeologists and allied researchers. In many cases, these sites provide the only extant avenue to the understanding of our pre-history and history, and the physical disturbance of these sites by unqualified individuals could result in the irretrievable loss of a segment of our cultural heritage. Examples of information sites include small, seasonally occupied aboriginal village sites, aboriginal hunting sites, kitchen middens, aboriginal and early historic farmsteads, military encampments, among others.

Aesthetic sites represent the best known examples of archeological and historical sites. These sites are generally characterized as having an obvious, and usually distinctive, physical appearance. Examples of this type site include large burial mound and ceremonial mound aboriginal sites, and architecturally significant structures and complexes, such as the Gamble Mansion and Viscaya. A number of these sites may also be considered as informational, since they contain original data unobtainable elsewhere.

Commemorative sites are perhaps the least significant type of archeological and historical site. They are important, generally speaking, due to their symbolic association with some aspect of our cultural heritage. Examples of this type site include the Florida Meridian Marker and the Old Spanish Trail. Some commemorative sites also contain informational and aesthetic elements.

It should be stressed that archeological and historical sites are a non-regenerative resource, and each individual site is unique, representing an irreplaceable element of our ethnic and cultural heritage. Florida is endowed with a valuable assortment of such areas, and many of these sites are presently protected by state and federal legislation. Many important sites however, are not currently protected, and the state is often dependent upon private interests and local governments to assist in the protection of these valuable resources.

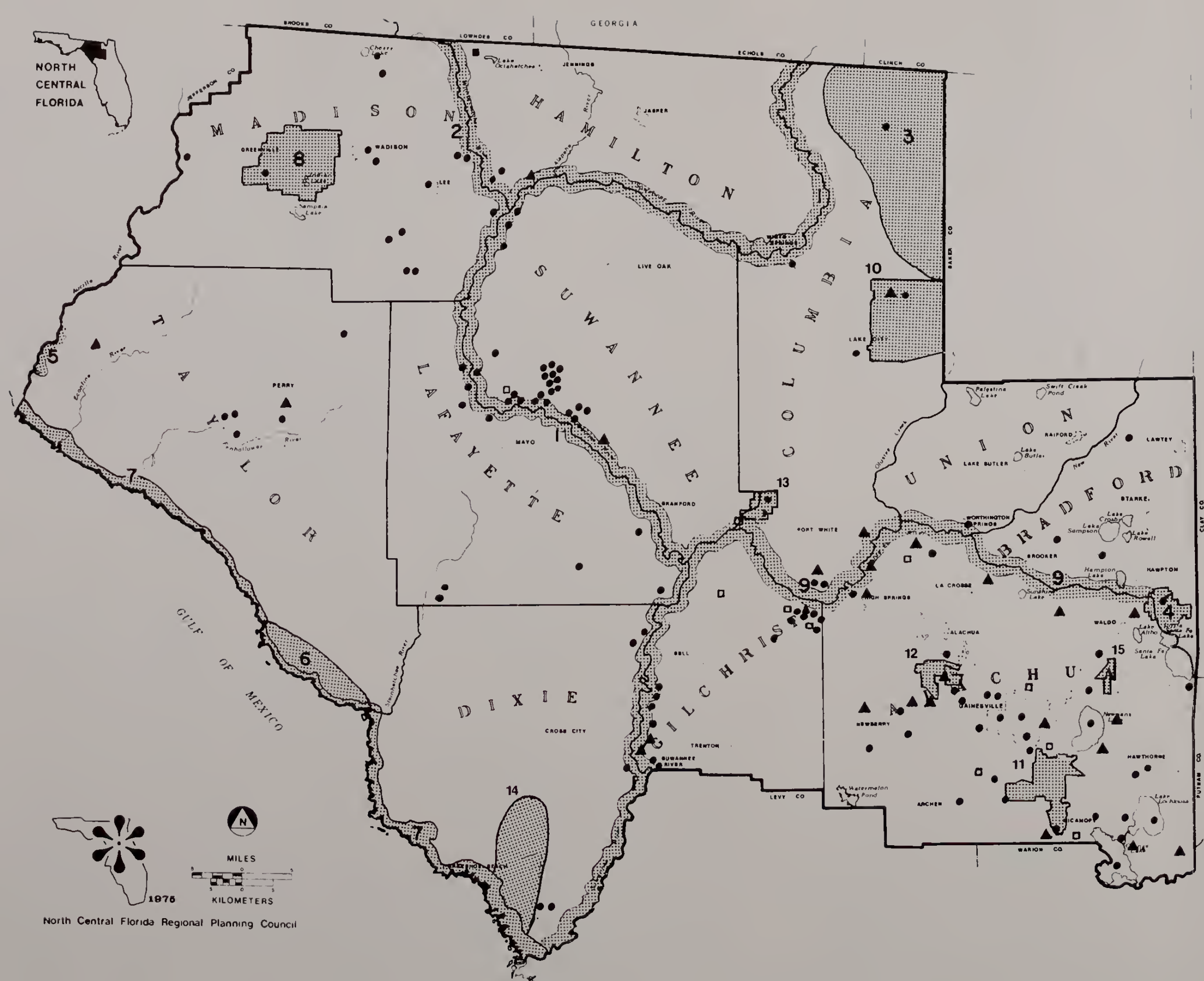
There are several areas of natural significance that contain natural features of an unusual or unique character, usually of comparatively small geographic extent. Examples range from such diverse features as coral reefs to unique sinkholes, caves and springs. Also included are waters given a "special stream classification" by the Department of Environmental Regulation. These include wild or scenic rivers, spring fed streams and others which have exceptional scenic, ecological, or recreational value to the public at large. The state has incorporated many such areas into its State Park System or protected them in other ways. There remain, however, many unprotected areas that are of significant value to both local and state interests.

SIGNIFICANT NATURAL AREAS

SITE LIST

- 1 SUWANNEE RIVER
- 2 WITHLACOOCHEE RIVER
- 3 PINHOOK SWAMP
- 4 SANTA FE HEADWATERS
- 5 AUCILLA RIVER SINK
- 6 TIDE SWAMP
- 7 GULF COASTAL MARSH
- 8 HIXTOWN SWAMP
- 9 SANTA FE RIVER
- 10 OSCEOLA NATIONAL FOREST
- 11 PAYNES PRAIRIE STATE PRESERVE
- 12 SAN FELASCO HAMMOCK
- 13 ICHETUCKNEE SPRINGS STATE PARK
- 14 CALIFORNIA SWAMP
- 15 AUSTIN CAREY MEMORIAL FOREST

- NATURAL
- ▲ HISTORIC
- ARCHEOLOGICAL



POPULATION FACTORS CONTRIBUTING TO GROWTH PATTERNS

The anticipated population and economic growth within the north central Florida region has been examined in detail in the 1976 Population and Economic Study prepared and published by this agency. Table 2 on the following page reduces to one table the population estimates for the Region as a whole and each of the 11 constituent counties. This table forms the basis for a discussion of population and economic factors contributing to urban growth and the consequent impact of that growth upon land uses.

The population within the Region is expected to grow approximately 168,700 people by the turn of the century, representing an increase of 66 percent over the estimated 1975 population. Employing a regional average for household size to the projected population increase suggests that the number of households in the Region will increase by more than 74,000 during that same time period. Since each new household requires a place to live, household formation is directly related to an increased demand for housing and supportive community facilities, such as transportation systems, water and sewer services, and utilities. The demand for housing will be concentrated around existing urban areas, as opposed to new communities, as the existing communities already have the infrastructure necessary to provide these support services.

Furthermore, as incomes rise, so do levels of consumption. With higher incomes comes the ability to purchase automobiles, travel, purchase larger homes, perhaps even second homes or vacation homes, and recreation. Affluence also affects the demand for more support services such as transportation facilities, utility extensions, shopping centers, education and health services. The Commission on Population Growth and the American Future has estimated that by the year 2000 average family income will rise from the current (1970) \$12,000 to more than \$21,000 in constant dollars, even if the work week were reduced to 30 hours and even if the population grew at the rate of three children per family. Furthermore, the Commission suggests:

"The average individual's consumption is expected to be more than twice what it is today, whether the population grows at the two-child or the three-child rate. As income increases, people show an increased preference for services, such as education and health services, as compared to manufactured goods. So, the population of the year 2000 will boost its consumption of services faster than the consumption of manufactured goods."

TABLE 2
POPULATION PROFILES
REGION III

<u>AREA/COUNTY</u>	<u>1975 est.</u>	<u>1980 est.</u>	<u>1990 est.</u>	<u>2000 est.</u>
Region III	256,000	288,200	355,700	424,700
Alachua	130,800	147,000	182,600	218,900
Bradford	16,300	18,100	22,300	26,500
Columbia	25,300	32,200	39,700	47,300
Dixie	6,600	7,400	9,200	11,000
Gilchrist	5,100	5,800	7,400	9,000
Hamilton	8,600	9,500	11,400	13,400
Lafayette	3,100	3,500	4,500	5,500
Madison	14,400	15,700	18,400	21,400
Suwannee	18,900	21,200	26,200	31,400
Taylor	14,600	16,300	20,200	24,100
Union	10,400	11,500	13,900	16,300

Source: 1975 estimate - 1976 Florida Statistical Abstract, Table 1.24, pg. 8
"Population Projections"

1980 - 2000 estimates - 1976 Population and Economic Study, North
Central Florida Regional Planning Council; some data previously
unpublished.

Thus, more people with more money, increasing the demand for housing and support services while maintaining a desire for low-density living in an urban area (with the infrastructure necessary to provide these services), translates into larger urban areas. This, in turn, means a greater need of land for urban purposes.

Table 3 indicates the amount of area, in square miles, needed to accommodate expected population increases in the Region to the year 2000. Comparing Tables 2 and 3, two points are noteworthy. First, those counties with the highest population in 1975 are expected to show the largest absolute growth in population to the year 2000, while coincidentally showing the highest percentage increase as well. These counties are population and economic centers within the Region, and are projected to maintain these roles in the years to come.

It follows logically that these same counties are also anticipated to experience the greatest lateral expansion of existing urban areas, as a consequence of accommodating additional people. However, this conclusion, as well as the figures in Table 2, are based upon two assumptions:

- a) That development trends continue the current course of low-density residential building as opposed to a shift to higher density and/or vertical development;
- b) The figures do not wholly preclude the advent of new communities being built, rather, represent total land area expected to be used for urban purposes.

Although low density and high density development will each ultimately result in a lateral expansion of urban areas, the low density alternatives will result in the expansion occurring at a faster pace. The assumption is made that the population in Region III will continue to prefer low density residential living and will manifest this preference in buying and building practices.

New communities are not considered to be a major force in community development within Region III for a variety of reasons. First, population growth is expected to be concentrated around current communities with their existing or planned abilities to provide community services to residents. Further, employment opportunities are expected to continue to locate around existing employment centers, to reduce cost associated with meeting energy requirements - transportation costs, utility costs and building costs. The need for new communities to service industrial employment needs is thereby lessened.

Finally, new communities would require the establishment of an entire infrastructure to serve community residents, the most expensive of which might be water and sewer systems, waste treatment and disposal systems, a transportation network and electric and gas utilities. Providing these services, plus other aspects of a community infrastructure, will probably prove too costly to make new communities a viable alternative.

TABLE 3
URBANIZED AREA ESTIMATES, IN SQUARE MILES OF AREA

	1975	1980	1990	2000
<u>REGION III</u>	<u>250.00</u>	<u>281.44</u>	<u>347.36</u>	<u>414.75</u>
Alachua	86.34	97.03	120.53	144.49
Bradford	34.05	37.81	46.58	55.36
Columbia	31.45	40.03	49.35	58.80
Dixie	11.82	13.25	16.48	19.70
Gilchrist	12.28	13.97	17.82	21.67
Hamilton	16.97	18.74	22.49	26.44
Lafayette	3.5	3.95	5.08	6.21
Madison	6.5	7.09	8.31	9.66
Suwannee	25.72	28.85	35.65	42.73
Taylor	15.06	16.81	20.84	24.86
Union	6.31	6.98	8.43	9.89

Assumptions:

1. That current density ratios within Urban & Built Up Areas remain static.

Corollary a. That development trends continue current course as opposed to moving from lateral, low density development to higher density and/or vertical expansion.

Corollary b. Greater Urban and Built Up Area figures does not limit growth to existing urbanized areas, does not preclude "new community" type development.

*The sum of each column may not equal the Region III total, due to the rounding of figures.

**See Appendix B for methodology.

The energy crisis and the anticipated duration of that situation may significantly alter people's ideas regarding life-styles, especially if the situation worsens, which will in turn affect residential development, consumption patterns and eventually, land uses. A more restrictive energy situation could result in a shift to higher density development, as developers begin to recognize the economics of buying and developing land where utilities and services are already provided. Furthermore, denser, self-contained communities may become more attractive to the consumer who is concerned about the distance to be traveled to and from work or the supermarket or the shopping mall.

It is impossible at this juncture to predict the future energy situation or the ramifications thereof. Local governments should remain flexible enough to review community development plans periodically and to alter these plans as the need is identified.

FUTURE LAND USE

PHYSICAL FACTORS

Existing Urban Areas

The existing urban areas in the Region play a major role in determining future land use, since these areas are expected to accommodate the greatest share of the population growth between now and the turn of the century. As these areas experience population and economic growth, there will be demands to expand the size of the community to allow for residential development, the location of schools and other community facilities, and the placement of business and industrial areas. The transportation network within a community will be expanded and improved to provide easier access within the community as well as with other cities, states and market centers. Each city and county government must engage in and complete a comprehensive plan pursuant to the Local Government Comprehensive Planning Act, including as one component of this larger plan a land use element.

The role of these areas in determining future land use is in large part a continuation of their current roles as population and economic centers. There are several reasons for this expectation, as alluded to earlier. Urban areas have many features which people and businesses alike are cognizant of when relocating. Electric and gas utilities, as well as water and sewer systems and solid waste disposal mechanisms, are usually assumed to exist in a metropolitan area, and a business may investigate to ensure that the systems can provide the service needed for that business to profitably operate. Roads, streets and signalization providing reasonable transit between home and work, or home and shopping, or recreation, or schools, or church, usually exists in urban areas. These same facilities, assisted perhaps by other transportation facilities such as airports, serve the dual purpose of providing ways for goods and commerce to come into the community, while allowing local merchants to export their goods to other market areas. Community facilities such as schools, fire and police protection, parks and open space, benefit everyone, and must expand with population and economic growth to avoid extending these services beyond the ability to adequately and safely provide them. Finally, a community infrastructure exists, a government or an orderly system of providing these and other services, and of managing the community.

For these and other reasons that have not been mentioned, urban areas are expected to attract the vast majority of the projected population growth

in the Region. Along with this concentration of people will come a concentration of employment opportunities, and cities that are economic centers today are expected to continue to be so throughout the coming years.

Soil Limitations

As discussed in an earlier section, some soils associations do not lend themselves to use for community development and these areas have been identified in the map entitled, "Soils Least Suitable for Community Development". This does not suggest that these soils cannot be used for some other purpose, although in some cases the same soils may be unsuitable for agriculture as well. The ability of these soils to accommodate these or other uses may be altered, but only at prohibitive costs.

A more difficult situation exists at the other end of the spectrum, however. Some soils are highly suited for agricultural use as well as community development, as can be seen by comparing the two maps in the Natural Resource Study entitled "Soil Suitability for Agriculture" and "Soil Suitability for Community Development". The point is that many soil groups that are relatively highly suited for agricultural uses also possess qualities making them highly suited for community development. Moreover, most of the cities within the Region are built in soil groupings with the highest suitability for agriculture, a fact that probably dates back to the beginning of these cities in a predominately agrarian society. Consequently, lateral expansion of these cities will, in many cases, convert to urban use soil that is among the best in the Region for agriculture.

Conflicting land use capabilities raises several questions which have been addressed here and must be addressed again and in much detail at the local level. The basic question raised is what constitutes the highest and best use of the land, agriculture or community development? There is no single answer with universal application; the approach taken here is that prime agricultural land should be preserved for that purpose, and conversion to urban use should be minimized, if not wholly precluded. This approach is tempered by the following points:

- a) Many existing urban areas are surrounded by prime agricultural land, which is recommended for preservation;
- b) These urban areas are expected to experience population growth, which in turn will result in the physical expansion of the urbanized areas to accommodate this growth;
- c) The need for urban expansion represents a small percentage of the total land area. Assuming that urban areas expand while maintaining the current density, urban area needs in the year 2000 are expected to be an additional 165 square miles, representing a 66 percent increase over today's figures, covering 6.6 percent of the total land area in the Region, as opposed to 3.7 percent today;
- d) These urban areas must be afforded the ability to expand, with the tacit assumption that the local decision makers

- will manage that expansion in an orderly manner, minimizing adverse impact upon the environment and natural systems;
- e) Based upon the maps presented in this study and the Natural Resources Study, there is more than enough land available that is suitable for development that is not also suited for agriculture to accommodate much more population and industrial growth than is anticipated in this Region.

Thus, a compromise of sorts is reached. While assuming that lateral expansion will occur in an orderly and manageable fashion around existing urban boundaries, prime agricultural land within the Region will be preserved for that purpose. This action will benefit the agrarian economy within the Region, will prevent an intense use of these lands which would irreparably alter the natural systems, and will provide some measure of open space for the Region's citizens while allowing at the same time for the expansion of urban areas.

Floodplains

Development in and around rivers, depressions and hurricane flood plains often appears quite feasible and even desirable when one considers the relative infrequency of major storms and resultant flooding. However, continued development within a flood plain usually increases the potential for human and economic loss, as this development effectively restricts the ability of the flood plain to absorb water and inhibits the flow of water from the land. Consequently, flood volume and velocity are increased by such development, and downstream flood hazards therefore increase. While construction of storm sewers, canals and other stream channel improvements may alleviate the potential for flooding problems within urban areas, such activity may also aggravate the problem by increasing the volume and velocity of flood waters flowing into stream channels. Clearly, proper management of the river flood plains is important in urbanized or urbanizing areas to ensure against property damage and loss of life.

Tidal flooding also has the potential to result in extensive damage, particularly along the coastal areas of the Region. Most of this type of flooding is the result of hurricanes or major storm events near the coast which cause onshore winds for several hours duration. A 100-year frequency storm for coastal areas in Dixie and Taylor Counties may result in tides as high as 14 feet above Mean Sea Level. Development in the coastal zone must be properly managed.

Flood plains provide valuable services when left in a natural state. In addition to providing flood ways to remove storm waters, wildlife may find refuge in vegetation that often flourishes in or near well watered areas. Groundwater recharge occurs through soils during high water levels. Flood plains may also provide useful open spaces near urban areas, and recreation is enhanced in natural settings.

Flood prone areas have been identified and delineated in the Natural Resources Study. The map provided in this study shows only those areas identified as

lying completely within the boundaries of the statistical 100-year flood. These areas have been placed in the conservation land use category, suggesting that while development is not wholly precluded, care must be taken to prevent obstruction within the flood plain, as well as human and economic damage.

Wetlands

These areas have often been regarded as worthless land suitable only for land filling, or perhaps agricultural uses if properly channelized and drained. However, wetlands have recently been recognized as providing a service vital to the maintenance of natural systems. Wetlands protect vegetation and wildlife that are dependent upon water for survival; serve as a medium for the propagation of food supplies within the food chain; serve as a stopgap against salt water intrusion in coastal areas; serve as surface water storage and aquifer recharge areas, and assimilate urban pollutants. Other specific and valuable functions are listed in the Natural Resources Study. Proper management of wetland areas is necessary to ensure the continued health, safety and welfare of area residents, and to protect the economy of the state. The majority of wetlands are also wooded, and thus serve an economic as well as a natural function.

Wetlands in the Region have been identified on the map so entitled on page 37. The importance of these wetlands is such that they have been placed in the preservation category in order to protect the natural values and important functions associated with them.

SOCIAL AND ECONOMIC FACTORS

Social and economic factors influencing growth are often difficult to distinguish and isolate from the physical factors of urban expansion, since the three are all interwoven in a complex web of relationships. A previous chapter examined in some detail the anticipated population growth for the Region, by county, and the resultant need for urban areas in terms of square miles of land consumed. Why this is happening is tied in some measure to the economies of the State and nation.

Previous studies have indicated that the State population has been increasing at a rate approximating 6,000 people per week, and that 90 percent of the State's population growth in the recent years has resulted from in-migration from other parts of the country. The national economy is related to this growth, indicating that a large number of people are financially able to move to Florida. The state is involved because employment opportunities are either here in fact or are perceived to be here and thus attract these people to migrate. Florida's climate may also be a factor, especially to a society becoming increasingly energy conscious. The comparatively mild climate may either reduce utility bills, or be more acceptable in harsh winters, bills notwithstanding.

The State's population growth has been experienced primarily in the larger existing urban areas, notably those along the coast and in the southern portions of the State. This is a trend that may recede somewhat in later years as these areas become more crowded, as land and housing becomes more and perhaps too expensive, and as cities and businesses begin to experience the effects of a dwindling potable water supply.

Speculating for the moment, this Region may become more and more attractive to those who can accept a mildly cold winter. There are vast stretches of open space here; the area is served by two interstate highways, as well as other roads providing easy access to cities and markets; the area is not crowded, certainly not to the extent of southern Florida, and land and housing prices are not as inflated. Finally, and perhaps most importantly, the area overlies a large portion of the Floridan Aquifer which possesses vast but as yet unidentified quantities of fresh water.

Other, more complex reasoning exists. However, the assumption implicit to this study is that existing population and economic centers in the Region will continue in those functional roles in the future, as explained by trend analysis in the 1976 Population and Economic Study.

LAND USE CATEGORIES

Land within the Region has been divided into three general use categories: preservation, conservation, and development. The definitions of these categories, and the accompanying maps, are presented here to assist local decision makers and citizens when faced with the resolution of issues regarding land use and land management. These maps are not specific to local land uses, although local land use plans were consulted where they existed. Nor are these maps intended as a substitute for local planning. The definitions and maps are intended as general policy guidelines, within which local governments should plan according to their specific goals and objectives.

The assumptions are restated:

- a) Existing urban centers are expected to experience population and economic growth, which will result in the physical expansion of the urban areas;
- b) The need for urban expansion represents a small percentage of the total land area. Urban areas constitutes approximately 3.7 percent of the total land area within the Region today; this percentage is expected to increase to 6.6 percent by the year 2000;
- c) While urban areas are expected to expand, that expansion will occur in such a way as to minimize adverse impacts upon the environment and natural systems;
- d) There is sufficient land available for development such that prime agricultural lands need not be converted to urban uses.

These assumptions may be altered by several factors, including a change in the energy supply question, a climatic change, a continued slowdown in the State or national economies, or a change in the preferences of people regarding low density living.

Preservation

The preservation classification includes those lands identified as having major ecological, hydrological, physiological, historical, or socioeconomic importance to the public at large. Preserving the integrity of these lands enhances the quality of life for residents and tourists, and will help maintain an ecological balance in the Region. Public policy should attempt to protect the functions or values associated with these areas to the maximum degree legally possible consistent with private property rights as determined by the courts. Sustaining commitments regarding functions and values should be made only by elected officials, and only after full consideration of pertinent factors and an awareness of long-term consequences.

Preservation areas include:

- Marine Grass Beds,
- Selected Coastal Marshes,
- Selected Fresh Water Swamps and Marshes (Wetlands),
- Historical, Archeological and Natural Areas,
- Parks and Recreation Areas,
- Prime Agricultural Areas,
- Rivers.

Conservation

Lands and waters having some intrinsic value attached to them are included in the conservation category, indicating that while development is not wholly precluded within these areas, it is to be strongly discouraged. Conservation areas are also lands and waters identified as having certain natural or institutional use limitations which require special precautions prior to conversion to development. Failure to consider the natural or institutional limitations may result in consequences harmful to the public health, safety and welfare, while failure to consider the intrinsic value of an area may result in a significant aesthetic loss.

As a land use classification falling between preservation and development, conservation areas are areas where development should be strongly discouraged and allowed only after thorough consideration by elected officials of the natural, institutional or intrinsic limitations attached to the land.

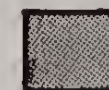
Conservation areas include:

- Areas subject to the 100-year flood,



NORTH
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PRESERVATION



PRESERVATION

The information provided on this map portrays physical characteristics of the land without regard for the location or expansion of urban areas and/or institutions. The Land Use Plan Map on page 63 shows the data presented here in relation to existing urban areas, projected future urban needs, institutions, transportation networks, and other land use categories. The reader is cautioned not to make interpretive conclusions without consulting the text and the Land Use Plan Map, where the social, economic and physical functions of urban areas are discussed and illustrated in detail.



1978



MILES



KILOMETERS

North Central Florida Regional Planning Council

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CONSERVATION



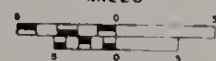
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1978



MILES



KILOMETERS

North Central Florida Regional Planning Council

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DEVELOPMENT POTENTIAL



AREAS WITH FEWEST
LIMITATIONS FOR DEVELOPMENT

The information provided on this map portrays physical characteristics of the land without regard for the location or expansion of urban areas and/or institutions. The Land Use Plan Map on page 63 shows the data presented here in relation to existing urban areas, projected future urban needs, institutions, transportation networks, and other land use contingencies. The reader is cautioned not to make interpretive conclusions without consulting the text and the Land Use Plan Map, where the social, economic and physical functions of urban areas are discussed and illustrated in detail.



1976



MILES



KILOMETERS

Significant Forest Areas,
Game Management Areas,
Significant Mineral Deposits,
Aquifer Recharge Areas,
Lands with significant soil, drainage, or other physical restrictions,
Noise Hazard Areas.

Development

Development areas include those areas which, 1) are presently developed; 2) are presently undeveloped, or vacant or are used for other purposes, including forestry and agriculture, which are intrinsically suitable for intensive development; and 3) are presently undeveloped having minor physical limitations such as poor drainage, poor soil permeability or load-bearing capabilities, which can be corrected. Although these lands are not generally considered to be environmentally sensitive, development decisions regarding lands with high agricultural potential should be considered with respect to long-term impacts to food production. Public policy should attempt to guide future growth and development into areas having the best intrinsic suitability, while simultaneously attempting to minimize and neutralize any identified conflicts. Flexibility should be incorporated into decision-making to address mining activities and the prospect of new communities as the need arises.

Development areas include:

Urban Development,
Rural Development,
Institutions (significant correctional, medical or educational),
Transportation,
Utilities,
Mining,
New Communities.

LAND USE PLAN

This composite map shows the relation of each land use category to the others, as well as to the existing urban areas, the expected expansion of these areas, and the existing transportation system. County lines have been added to further assist the reader in identifying the relative position and scale of each land use category.

The majority of the land within the Region has been placed in either the preservation or conservation categories, indicative of the importance associated with maintaining the natural integrity of these areas. Furthermore, excluding the lands surrounding existing urban centers, which has already been assumed as land for conversion to urban uses, there is sufficient land identified in the Region as suitable for development to accommodate all and more of the projected population increase. An

important distinction to note is that the lands placed in the development category are not suggested as being best suited for any and all development; rather, those lands are identified as possessing the fewest apparent physical limitations to development. The actual cost of developing a parcel of such land may prove prohibitive in one area of the Region and economically feasible in another. In all cases, development should be preceded by a thorough investigation of the environmental impacts not only to the immediate area but to other natural systems and areas as well. Such a local and interlocal impact analysis should identify and correct or avoid adverse impacts to the environment or to future human development, such as aquifer pollution, destruction of wetlands, and downstream flooding, among others.

LAND USE ISSUES

Conflicting Land Use Capabilities - This has been discussed previously in some detail. The land use categories and maps defined here are recommended as a policy guide to local governments, in conjunction with the data compiled in the Natural Resources Study. Local governments are strongly urged to recognize the values associated with these lands and to accept the land use assumptions and categories as described herein.

Water Supply - The Region rests atop a large portion of Floridan Aquifer and possesses a number of fresh water springs and rivers. While the supply of fresh water appears to be vast, it is as yet of undefined quantity, and it would not be wise from a planning perspective to assume that the supply is unlimited. Care must be taken to ensure that development does not result in further salt water intrusion into the aquifer, or in the introduction of pollutants into the aquifer, or to a significant lowering of the water table. Likewise, the rivers must be protected from abuses by developments, as rivers constitute a valuable natural resource not only as a source of fresh water, but also as wildlife habitats and centers of recreational activities.

Questions and issues regarding water supply and use are the primary responsibility of Water Management Districts, and the Region contributes land area to two. They are: 1) the Suwannee River Water Management District; and 2) the St. John's River Water Management District. The largest portion of the Region lies within the boundaries of the Suwannee WMD.

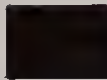
More detailed information can be obtained from the chapter entitled "Water Resources" from the accompanying Natural Resources Study.

Energy - Concerns for energy consumption rates along with costs may alter land use patterns within and around urban centers. Cities may become more compact, with higher densities than exist today if people are willing to concede some freedom of space for relief from utility and transportation costs. Vertical, as opposed to lateral, expansion may become more acceptable.

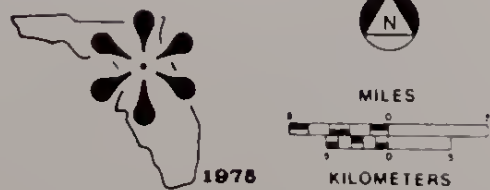


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LAND USE PLAN YEAR 2000

-  EXISTING URBAN, INSTITUTIONS
-  FUTURE URBAN
-  DEVELOPMENT POTENTIAL
-  CONSERVATION
-  PRESERVATION

Due to limitations of scale incurred when reducing data to a map of this size, representations of "Future Urban" areas may appear disproportionate with the text of the study or with existing comprehensive or development plans. The reader is further advised to consult the Goals, Objectives and Policies in this study when viewing and interpreting this map.



New Communities - County and regional governments may be faced with the prospects of new communities, but this is considered unlikely. In addition, new communities are discouraged several times in this report, and local governments are urged to support this position in the land use and development policy statements.

GOALS, OBJECTIVES, AND POLICIES

The goals, objectives and policies are intended as policy statements as a supplemental guide to local decision makers. Included here are the goals, objectives and policies pertinent to land use and natural resources.

LAND USE

- GOAL: To manage growth and guide development within the Region utilizing land management techniques to maximize efficiency in (land) use while minimizing current and potential long-term detrimental impacts to the land, natural resources or the quality of life.
- OBJECTIVE: To encourage the orderly and harmonious development and redevelopment of existing communities.
- POLICIES:
- To maintain and enhance the quality of the environment by the proper use and development of land, within the tolerances of natural systems.
 - To utilize energy and natural resources prudently and efficiently in the use and development of land.
 - To employ land use guidelines to preserve land and natural resources for use by future generations.
 - To assess a wide variety of alternatives to lateral expansion of communities to accommodate the growth of human settlements.
 - To encourage the revitalization and redevelopment of existing communities, recycling natural resources where possible, as opposed to initiating new communities.
- OBJECTIVE: To protect and promote the health, safety, social and economic well-being of residents within the Region by properly managing land development.
- POLICIES:
- To support the preservation of areas of historical and archaeological significance.
 - To encourage the preservation of areas of unique agricultural significance.
 - To encourage the judicious use of those lands which are suitable for both agriculture and development by providing local governments with the most up-to-date information available for use in the decision-making process.
- OBJECTIVE: To protect and maintain the desirable social and economic characteristics and functions of urban areas in a manner consistent with the capabilities of the natural and man-made systems of the area.
- POLICIES: To encourage the provision of adequate community services and facilities.

To assist local governments in the development and implementation of comprehensive plans.

OBJECTIVE:

To manage land development in an equitable manner based upon a plan implemented according to consistent development standards.

POLICIES:

To distribute growth and development within the Region in a manner consistent with support capabilities of available resources.

To assist local governments in the development and implementation of comprehensive plans, including but not limited to land use guidelines, zoning and subdivision regulations.

NATURAL RESOURCES: GENERAL

GOAL:

Support the optimal use of the Region's resources, prevent their further degradation and rectify past damage.

OBJECTIVE:

1. Plan for and promote the wise use of both renewable and non-renewable natural resources.
2. Foster the development of human benefits obtainable from the natural environment.
3. Disseminate information to local governments and the general public about the elements of the natural and man-made environment, their interrelationships and major problems and opportunities they present to community and regional development.
4. Provide leadership and a workable strategy for the efficient management of the Region's natural resources.
5. Promote responsible development within the tolerances of natural systems.
6. Encourage the preservation of the Region's important open spaces.

POLICIES:

To incorporate elements of resource management into all plans and programs.

Rock and Mineral Resources

GOALS:

1. To conserve and provide for the wise management of rock and mineral resources.

2. To insure that land reclamation is accomplished in a manner compatible with the natural environment.

OBJECTIVE:

To plan for and guide the mining and utilization and mineral resources tempered by a consideration of the balance between long-term national, state and regional needs as well as regional environmental and social cost.

POLICIES:

1. To promote land reclamation in mining areas.
2. Encourage planned land use in areas to be strip mined.
3. Encourage local governments to enact mining and reclamation ordinances and assist in their formulation upon request.
4. To encourage the use of under-utilized renewable resources over finite resources and encourage the recycling of resources.
5. Endorse and encourage the implementation of more efficient mining techniques.

Water Resources

GOALS:

1. Support the attainment of "swimable and fishable" waters throughout the Region by 1985 consistent with national goals as expressed in PL 92-500.
2. Assist in the protection and management of the surface and ground waters of the Region to insure the availability of an adequate quantity and quality of water to all users.
3. Encourage the recognition of and respect for the benefits afforded and the limitations imposed by coastal marshes, swamps, flood plains and other wetland areas.

OBJECTIVES:

1. To incorporate state and federal environmental policies and standards in the regional plans and programs involving the management and protection of water resources.
2. To control growth in recharge areas so that normal recharge functions will not be impaired.
3. To pursue programs, such as '208' areawide waste water management planning, which will afford the Region mechanisms for water quality management.

4. To plan for the rational development or non-development of sensitive wetland areas.

POLICIES:

1. To continue to seek planning designation for this Council and Planning District III and work for the subsequent implementation of a '208' areawide waste water management plan for the region.
2. To plan for modifications to the natural hydrologic conditions by structural improvements only when determined that such activity is in the best long-term public interest.
3. Discourage use of septic tanks, fertilizer, pesticides, and other contaminants on land adjacent to estuaries, coastal marshes, wetland, lakes or streams.
4. Encourage waste water reuse and renovation.
5. Plan for urban growth in concert with local water availability.
6. Support water management district efforts in planning for long-range water resource allocation.
7. Carefully plan and distribute growth around lakes, rivers, and prime recharge areas in order to insure that such development is compatible with hydrologic systems.

Vegetation (Forestry and Agriculture)

GOALS:

1. Encourage the maintenance of integrity of prime agriculture lands and alleviate the threat of loss of these areas.
2. Assist in the conservation of lands best suited to agricultural uses in the Region.
3. Support the management of forest resources in a manner compatible with land capabilities.

OBJECTIVE:

1. Promote an awareness of agricultural and forest management problems or opportunities.
2. Prevent or minimize loss of agricultural lands to suburban development.
3. Help minimize the potential adverse impacts that intensively managed agriculture lands may have on adjacent ecosystems.

POLICIES:

1. Support forest management programs which promote mixed use and aesthetics and favors clear-cutting on a small tract basis only.
2. Discourage clear-cutting along lakes and streams which could cause erosion problems and endorse selective harvesting in sensitive areas.
3. Discourage site preparation and building practices that unnecessarily remove trees and natural ground cover.
4. Encourage and plan for greater efficiency and conservation in agricultural practices.

Soils

GOAL:

Give due consideration to soil potentials or limitations in the development and use of land.

OBJECTIVE:

Assist in the prevention of undue loss of valuable soils due to erosion caused by agricultural mismanagement, development abuses and other human activities.

POLICIES:

1. When major land alterations become necessary, wherever possible, recommend that exposed soils be expeditiously stabilized and restored.
2. Incorporate consideration of soil potentials and limitations in land use planning and review processes.
3. Encourage preparation of modern soil surveys in all counties in the Region.

Topography and Climate

GOALS:

1. Insure that the regional planning process considers the primary determinants of climate quality as viable elements of resource management and site development.
2. In planning for future land use, insure the consideration of topography as it relates to distinct land use potentials, i.e., coastal zone, hurricane flood zone, flood plain or areas excessively steep or flat in nature.

OBJECTIVES:

1. Encourage energy conservation through proper site planning.
2. Discourage development in hazardous areas and require specific modifications adapting development to unique conditions.

POLICIES:

1. Encourage on site energy conservation including site planning, optimum use of natural vegetation, efficient structural designs, solar heating and cooling.
2. Encourage development to take advantage of slope and prevailing winds to minimize pollution, maximize the benefits of climate, and achieve economy in construction.

Wildlife Resources

GOALS:

1. Provide for the highest and most practical degree of management for all game species.
2. Provide for the conservation of all wildlife and preservation of those species recognized as rare and/or endangered.

OBJECTIVES:

1. Plan for and promote the conservation of wildlife as an essential element of the ecological components in the natural system.
2. Maintain and preserve the natural complexity and stability of the regions interacting natural systems.

POLICIES:

1. Encourage the protection and conservation of important wildlife habitat of the region through state and federal programs.
2. Plan for the retention of important wildlife "islands" or communities in and around urban centers.
3. Enhance the recognition of wildlife values through environmental planning projects.
4. Promote the concept of wildlife as an essential element of outdoor recreation activities.

Areas of Environmental Value

GOAL:

Protect and preserve recognized areas of high natural environmental values, such as unique coastal marshes, springs, hammocks and geological features.

OBJECTIVE:

Participate with state and federal agencies in the identification of rare or unique or natural sites.

POLICIES:

1. Endorse the preservation or conservation of important unique natural or environmental areas through programs such as the Florida Environmentally Endangered Lands Program.

2. Discourage development adjacent to sensitive natural areas such as coastal marshes unless development can be demonstrated to have insignificant adverse impact or there is overriding public interest.
3. Support public use of wilderness areas only to the extent compatible with the purpose of the area.
4. Support the acquisition or management of selected natural areas by state, federal or local governments.
5. Work toward refinements in environmental assessment and planning capabilities to improve project evaluations for those activities having long-term or cumulative impacts upon the physical environment.

APPENDICES

APPENDIX A

COMPILATION OF TECHNICAL DATA

The information appearing in tables of the Natural Resources Study and Land Use Plan for north central Florida are similar in nature. Both reports define land uses in forms suitable to the specific needs and intent of each individual study. Although all information presented was compiled from authoritative sources, discrepancies may be observed between these documents and even individual tables.

In preparing these documents the need for a diversity of information mandated the use of a number of technical reference documents. Although efforts were made to achieve consistency, no major attempt was made to reconcile all sources of data. Therefore, minor inconsistencies between figures presented in both documents are apparent. These inconsistencies are attributed to both variations in land use definition as well as data sources.

Definitions in land use categories can be misleading in terms of the data presented unless each text is thoroughly read. For example, forestry figures in the Natural Resources Study pertain to total forested lands, while similar figures given in the Land Use Plan pertain specifically to commercial forestry lands. This is also illustrated by forest figures given for each county. In the instance of Alachua County, the Natural Resources Study reports total forest lands as 311,400 acres, and similarly the Land Use Plan records a total of 258,000 acres of commercial forest lands.

A second problem, that associated with different data sources, must remain unresolved pending further land use analyses as anticipated in the preparation of the Regional Comprehensive Plan. One example of this type of problem can readily be illustrated by citing total land area figures for Alachua County from three different sources. These include:

Forest Statistics for Northeast Florida (1970) - 588,200 acres
1974 Census of Agriculture - 586,048 acres
Florida Statistical Abstract (1976) - 617,454 acres.

Despite inconsistencies of this nature, the reader should note that the discrepancies between reports and individual tables represent an average error of less than five percent and typically less than one percent. Therefore, the broad regional land use analyses contained in both documents are unaffected by this insignificant degree of difference.

APPENDIX B

METHODOLOGY FOR DETERMINING FUTURE URBANIZED AREA ESTIMATES, IN SQUARE MILES OF AREA

The equation employed was:

$$\frac{A_1}{P_1} = \frac{A_2}{P_2}$$

Where:

A_1 = Urban and Built-up Area, in square miles, current estimate.¹

A_2 = Urban and Built-up Area, year (N) (Unknown).

P_1 = Population Estimate, 1975.²

P_2 = Population Estimate, year (N).³

Solve for A_2

¹ Refer to the respective county land use profile for figures and data sources.

² Taken from the 1976 Population and Economic Study, published by this agency.

³ Also taken from the 1976 Population and Economic Study, in addition to unpublished data generated during that project.

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